# GEOGRAPHY (GEOGRPHY)

**GEOGRPHY 1040 Planet Earth 4 Credits**
The features of the natural environment (lithosphere, atmosphere and hydrosphere); their character, distribution, origin and relationship with human beings. Principles of environmental conservation are also included. A field trip is required. Not open to students who have had GEOGRPHY 1140 or GEOGRPHY 1240.

**Components:** Laboratory, Class  
**GE:** Natural Science

**GEOGRPHY 1050 Introduction to Human Geography 3 Credits**  
An introduction to the global distribution of human characteristics. Topics will include population, cultural, agricultural, industrial, economic, political, urban, linguistic and religious geographies. The character, distribution, and origin of these geographies will be examined along with their relationship to each other and the physical environment.

**Components:** Class  
**GE:** International Education, Social Sciences

**GEOGRPHY 1230 Survey of Cultural Geography 3 Credits**  
An introduction to the culture of peoples, with a focus on the constructing of culture and the primary components of culture: ethnicity, language, religion, and popular culture. The course concentrates on cross-cultural comparisons in an attempt to broadly describe cultures from around the world.

**Components:** Class  
**GE:** International Education, Social Sciences

**GEOGRPHY 1330 World Regional Geography 3 Credits**  
Geographic understanding of the major regions of the world; emphasis is placed upon human-environmental relationships.

**Components:** Class  
**GE:** International Education, Social Sciences

**GEOGRPHY 1370 The Land Ethic 4 Credits**  
This course examines the geographical distribution of vegetation types and habitats to illustrate the environmental and historical factors that determine these patterns, their relationship to human activities, and their implications for environmental stewardship.

**Components:** Laboratory, Class  
**GE:** Natural Science

**GEOGRPHY 2230 Cartography 3 Credits**  
This course employs hands-on and project-based learning to explore the concepts, principles, and techniques related to crafting well-designed and ethical maps using contemporary tools.

**Components:** Laboratory, Class

**GEOGRPHY 3040 Python for GIS 3 Credits**  
This course will introduce Python within the context of ArcGIS, starting with the basics and foundations of Python then working up to creating tools and tasks within Python for ArcGIS. Knowledge of Python can enhance the GIS experience and make available tools and processes not accessible through ArcGIS desktop. A working knowledge of Python will make produce a more efficient GIS user and a more attractive job candidate. No previous programming experience is assumed, but knowledge of ArcGIS is critical.

**Components:** Laboratory, Class  
**Prereqs/Coreqs:** P GEOGRPHY 3230 or equivalent

**GEOGRPHY 3120 Geography of the Driftless Area 3 Credits**  
The Driftless Area is a region in all senses of the word. Unique in its geology, landscape, culture, economy, and environment, all of which overlap in profound spatial synchrony, the Driftless Area provides an ideal place to explore our surrounding landscape in ways that illustrate some of the most important ways in which people create identity and express themselves through their relationships with the land. This course will use a regional approach to examine what makes the Driftless Area distinct.

**Components:** Class  
**Prereqs/Coreqs:** P GEOGRPHY 1040 or GEOGRPHY 3140 or GEOGRPHY 1230 or GEOGRPHY 1330

**GEOGRPHY 3130 Geography of the United States and Canada 3 Credits**  
A regional approach to the cultural, economic and physical geography of the United States and Canada.

**Components:** Class  
**GE:** Social Sciences  
**Prereqs/Coreqs:** P GEOGRPHY 1230 or GEOGRPHY 1330 or consent of instructor
**GEOGRPHY 3140 Global Landforms 4 Credits**
This course is the study of the distribution of landforms across the globe, with consideration of the processes and historical factors that determine these patterns. Lab techniques will include map basics, regional landscapes and field techniques. Field trips are required.

**Components:** Laboratory, Class

**GE:** Natural Science

**Prereqs/Coreqs:** P: GEOGRPHY 1040 or GEOLOGY 1140 or Instructor Consent

**GEOGRPHY 3170 Space, Place, and Gender 3 Credits**
An introduction to gender and geography. The role of gender in the study of geography, which is concerned with places, linkages, patterns of flow, locations, landscape, and the social/political/economic production of space.

**Components:** Class, Discussion

**Cross Offering:** WOMGENDR 3170

**GE:** Gender Studies

**GEOGRPHY 3230 Geographic Information Systems 3 Credits**
An overview of core GIS concepts including map projections and coordinate systems, raster and vector data models, digital data sources, digitizing, map design and production, attribute data, data manipulation, and fundamental spatial analysis.

**Components:** Class, Laboratory

**GEOGRPHY 3240 Weather and Climate 4 Credits**
Elements and controls of weather and climate; origin, characteristics and distribution of climate and vegetation.

**Components:** Class, Laboratory

**GE:** Natural Science

**Prereqs/Coreqs:** P: GEOGRPHY 1040 or Instructor Consent

**GEOGRPHY 3330 Environmental Conservation 3 Credits**
The relationship of humans and the natural environment. Topics include environmental world views, the effects of eco system disruption, and use and misuse of natural resources.

**Components:** Class

**GE:** Social Sciences

**Prereqs/Coreqs:** P: Junior standing or consent of instructor

**GEOGRPHY 3340 Biogeography 4 Credits**
This course examines Earth’s biosphere, which extends from the seafloor, to about 5 miles into the atmosphere. Students will study the biosphere, the distribution of biota worldwide, both past and present, and the factors that determine these patterns. Topics discussed include evolution, extinction, dispersal, altitudinal zonation, zoogeographic provinces, regional climate, vegetation structure, ecological succession, species richness, global climate change, biomes, and island biogeography.

**Components:** Laboratory, Class

**Prereqs/Coreqs:** P: GEOGRPHY 1040 or GEOGRPHY 1370 or BIOLOGY 1150 or BIOLOGY 1650 or BIOLOGY 1750 or consent of instructor

**GEOGRPHY 3520 Remote Sensing of the Environment 3 Credits**
Introduction to the study of the environment through air photos and satellite imagery. Topics covered includes the principles of remote sensing, interactions of the electromagnetic spectrum with the atmosphere and earth’s surface, aerial photographs, satellite systems, and sensors. The emphasis is on applications to climate change, landcover mapping, forestry, agriculture, and oceanography.

**Components:** Class, Laboratory

**GEOGRPHY 3530 Topics in Regional Geography 2-3 Credits**
Selected world regions are studied in a traditional regional or topical format.

**Components:** Class

**GE:** International Education, Social Sciences

**GEOGRPHY 3570 Fire History and Ecology 3 Credits**
This course will integrate lecture, field work, and hands-on research experience to illustrate the key role of fire in nearly all of Earth’s terrestrial ecosystems. Students will examine the relationship between fire and vegetation patterns from ecological to evolutionary time scales, with emphasis placed on the role of people in shaping historical patterns of fire and the implications of this influence for how we engage with fire as a society. Through collaborative research, students will develop fire history information from a variety of sources and connect their findings to modern management, conservation, and stewardship actions.

**Components:** Field Studies, Laboratory, Class

**Prereqs/Coreqs:** P: GEOGRPHY 1040 or GEOGRPHY 1370 or BIOLOGY 1750 or BIOLOGY 2010 or RECLAM 1010 or Instructor Consent
GEOGRPHY 3630 Geography of Latin America 3 Credits
The geographic region of Latin America is comprehensively studied, both regionally and topically. Topics include those from both physical and human geography.
Components: Class
GE: International Education, Social Sciences
Prereqs/Coreqs: P: a 1000-level course in geography or consent of instructor

GEOGRPHY 3720 Advanced Remote Sensing 3 Credits
This course focuses on the theory and techniques of digital image processing (DIP) using current remote sensing techniques. The course will emphasize radiometric and atmospheric corrections, image enhancement, and pattern recognition via classification.
Components: Class, Laboratory
Prereqs/Coreqs: P: GEOGRPHY 3520

GEOGRPHY 3730 Geography of Europe 3 Credits
The geographic region of Europe, including Russia, the Baltic States, Ukraine, Belarus, and Moldova, is comprehensively studied, both regionally and topically. Topics include those from both physical and human geography.
Components: Class
GE: International Education, Social Sciences
Prereqs/Coreqs: P: a 1000-level course in geography or consent of instructor

GEOGRPHY 3750 Field Geography of the Western United States 1-4 Credits
This course is built around an extended field experience in selected regions of the western United States. Topics for study will include physical, human, and environmental geography.
Components: Discussion, Class
Prereqs/Coreqs: P: a previous course in geography or consent of instructor

GEOGRPHY 3850 Geography of the National Parks 3 Credits
This course examines the National Park System (NPS) of the United States from a geographic perspective. The course will use the NPS as a lens through which to examine issues of geographic importance, including those from physical, human, and environmental geography. There will be a required field trip.
Components: Discussion, Class
Prereqs/Coreqs: P: a previous course in geography or consent of instructor

GEOGRPHY 3930 Geography of Asia 3 Credits
A regional and topical comprehensive study of the geographic regions of South Asia, Southeast Asia, and East Asia. Topics include those from both physical and human geography.
Components: Class
GE: International Education, Social Sciences
Prereqs/Coreqs: P: a 1000-level course in geography or consent of instructor

GEOGRPHY 3950 Guided Research 1-3 Credits
Research conducted by a student in close collaboration with a faculty member; culminates in a formal presentation and/or written report.
Components: Field Studies, Laboratory

GEOGRPHY 3960 Geography of Japan 1-6 Credits
A detailed study of Japan, featuring its physical, cultural, human, demographic, and political geography. *The heart of the course will be a three- or six-week field study in Japan. During the first three weeks students travel from Hokkaido to Kyushu. Students who only participate in this section can sign up for 1-3 hours of credit. Students signing up for the six-week session will complete the three-week travel section and then spend three more weeks in Kumamoto Prefecture. Students signing up for the six-week session can sign up for 1-6 hours of credit. The requirements for the three- and six-week courses are the same for the first three weeks. The six-week course also requires an original field research assignment.
Components: Field Studies
GE: International Education, Social Sciences
Prereqs/Coreqs: P: consent of instructor

GEOGRPHY 4030 Geography Seminar 3 Credits
Development of geographic thought, library research techniques, organization and presentation of research data.
Components: Seminar
Prereqs/Coreqs: P: Completion of 24 credits of GEOGRPHY courses and department consent
GEOGRPHY 4120 Topical Seminar 2-3 Credits
A specific geographic topic within a seminar format.
Components: Seminar, Laboratory
Prereqs/Coreqs: P: junior standing

GEOGRPHY 4150 Global Environmental Change 3 Credits
This course will examine past and current environmental changes, with a focus on climate change. To better understand these environmental changes, the framework of environmental thought will be examined to provide context.
Components: Class
Prereqs/Coreqs: P: any physical geography course or consent of instructor

GEOGRPHY 4330 Advanced Geographic Information Systems 3 Credits
This course builds on concepts covered in GEOGRPHY 3230 (Introduction to GIS) with an emphasis on spatial analysis using advanced methods for rasters and vectors.
Components: Class, Laboratory
Prereqs/Coreqs: P: GEOGRPHY 3230

GEOGRPHY 4350 Gender Relations in Cross-Cultural Perspective 3 Credits
This course examines how people's gender roles are defined across cultures. Specifically we examine implications of these definitions with respect to various issues such as division of labor within households, gender differentiated health issues, domestic violence, gender and politics. We address these issues at a variety of geographic scales ranging from household to the national and global. Critical thinking, analysis, research and writing skills will also be developed.
Components: Class, Discussion
GE: Gender Studies
Prereqs/Coreqs: P: GEOGRPHY 3170 or consent of instructor

GEOGRPHY 4530 Historical Geography of the United States 3 Credits
Recreation of past geographies; changes through time in the physical and cultural environment.
Components: Class
Prereqs/Coreqs: P: 3 credits in geography or consent of instructor

GEOGRPHY 4660 Cooperative Field Experience 1-8 Credits
Enhancement of the educational experience through placement of a student with a cooperating agency, business, industry or institution. The nature of the assignment, type of experience, number of credits and evaluation procedure to be stipulated in a statement of agreement learning contract) between the student and the department.
Components: Field Studies
Prereqs/Coreqs: P: consent of department chair

GEOGRPHY 4760 Geography Field Study 1-8 Credits
Field trip of one to eight weeks duration to study regional or systematic geography firsthand in North America or overseas.
Components: Field Studies

GEOGRPHY 4920 Independent Study in Geography 1-3 Credits
Independent work on a particular topic or problem supervised by a staff member.
Components: Independent Study
Prereqs/Coreqs: P: consent of department chair